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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/415,481	10/08/1999	ANDREW C. HSU	20864.00700	4880

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MALCOLM B. WITTENBERG  
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SUITE 2000  
SAN FRANCISCO, CA 94120-7936

EXAMINER

ZAMANI, ALI A

ART UNIT PAPER NUMBER

2674

DATE MAILED: 04/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/415,481

Applicant(s)  
Hsu et al.

Examiner  
Ali Zamani

Art Unit  
2674



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Jan 15, 2002
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 34-63 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 34-37, 46-54, and 56-59 is/are rejected.
- 7) ☒ Claim(s) 38-45, 55, and 60-63 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirements.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some\* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 9 20) ☐ Other: \_\_\_\_\_

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 34-37, are rejected under 35 U.S.C. 103(a) as being unpatentable over Aroyan et al. (US Pat. No. 6,163,313 ).
3. In regard to claims 34-37, Aroyan et al. a transparent capacitive touch sensing system (6) comprised of: a substantially transparent sensor which can capacitively sense a user's finger or conductive stylus when either are touching or in very close proximity to sensor (see col. 9, lines 38-40) and a sensing device for detecting capacitance changes on substantially transparent sensor (Fig. 5, col. 10, lines 21-45), a controller electronics (110) which is capable of various functions, like may excite the electrode pattern and measure the voltage (see Fig. 5) and as another option, the controller electronics (110) may support AC operation by driving the four electrode-pattern corners with an AC signal having a fixed voltage amplitude, (see Fig. 12) for detecting capacitance changes on substantially transparent sensor which by performing these AC functions are also known as capacitive touchscreen controllers (col. 9, lines 21-43). Aroyan et al. also teach that the components of the touchscreen (105) are substantially transparent so that the two

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dimensional graphics or data projected by the CRT face (150) is seen through the touchscreen (105), for the substantially transparent sensor is disposed on a substrate (200) which the substrate may be accordingly constructed from glass, plastic, or from other transparent material and alternatively, if the resultant product is to be an opaque sensor, then the substrate (200) may be glass, rigid plastic, or various types of printed circuit board materials, or a metal having a previously applied insulating layer (see col. 10, lines 21-29). Aroyan et al. further teach a flexible film (215) having a conductive coating (220) which reside on the underside of the flexible film (215) and if the sensor which is to be transparent, then the conductive coating (220) must also be transparent or substantially transparent (Fig. 5, col. 11, lines 7-24). Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to use a flexible substrate material to construct the sensor in order to provide a touch sensing system capable of installing in various types of display devices.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 46-54, 56-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aroyan et al. In view of Muroi (US Pat. No. 5,021,640).

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In regard to claims 46-54 and 56-59, Aroyan et al. are discussed above. Aryon et al. substantially teach the above claimed limitations except for teaching a “substantially transparent two-dimensional sensor”. However, Muroi teaches a bar code reading device which comprises a transparent touch sensor section (20) formed on the liquid crystal display section (10) which controlled by means of liquid crystal display controller (31) disposed inside main body (1) and a light beam reflected from article (7) can pass through LCD panel (10) and touch sensor panel (20) includes a plurality of touch sensor (21) which are assigned on a one-to one basis to the keys (matrix) (Figs 1-4, col. 1, lines 50-67). Thus, it would have been obvious to one of ordinary skill in the art to modify the touch panel of Aroyan et al. with touch panel of Muroi to provide a touch sensor system with uniform density of sensor traces.

5. Claims 38-45, 55, 60-63 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kent et al. Is made of record to show a type of touch sensing system.

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Zamani whose telephone number is (703) 308-6414. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerepe, can be reached on (703) 305-4709.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, DC 20231

**or faxed to:**


**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Ali Zamani

April 05, 2002

  
RICHARD HJERPE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600